

## **Energy Bands as a Function of the Geometry of the n-Well Potential**

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In order to understand the energy bands formation, run the Piece-Wise Constant Potential Barrier Tool (PCPBT) for the case of 10 barriers and the following barrier and well parameters:

- (a)  $V_{\max} = 0.8 \text{ eV}$ ,  $V_{\min} = 0 \text{ eV}$ ,  $L_{\text{barrier}} = 4 \text{ nm}$  and  $L_{\text{well}} = 4 \text{ nm}$ .
- (b)  $V_{\max} = 0.8 \text{ eV}$ ,  $V_{\min} = 0 \text{ eV}$ ,  $L_{\text{barrier}} = 4 \text{ nm}$  and  $L_{\text{well}} = 10 \text{ nm}$
- (c)  $V_{\max} = 0.8 \text{ eV}$ ,  $V_{\min} = 0 \text{ eV}$ ,  $L_{\text{barrier}} = 2 \text{ nm}$  and  $L_{\text{well}} = 10 \text{ nm}$

Comment on the position of the bands and the widths of the bands as a function of the barrier and well thickness. Support your findings with physical reasoning.